

**REMARKS**

This is a full and timely response to the outstanding non-final Office Action mailed May 12, 2004 (Paper No. 5). Upon entry of this response, claims 3-5, 19-23, 25, 41, 43, 45-46, and 48-61 are pending in the application. In this response, claims 3-5, 19, 41, 43, 45-46, and 48 have been amended, claims 50-61 have been added, and claims 1-2, 6-18, 24, 26-40, 42, 44, and 47 have been cancelled. Applicants respectfully request that the amendments being filed herewith be entered and request that there be reconsideration of all pending claims.

1. Rejection of Claims 47-49 under 35 U.S.C. §102

Claims 47-49 have been rejected under §102(e) as allegedly anticipated by *Butterfield* (U.S. 5,917,852). Applicants respectfully assert that these rejections have been overcome by the claim amendments made herein, or rendered moot by cancellation. A proper rejection of a claim under 35 U.S.C. § 102 requires that a single prior art reference disclose each element of the claim. *See, e.g., W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983).

a. Claim 47

Claim 47 has been cancelled, and therefore the rejection is moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of this cancelled claim in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

b. Claim 48

Applicants respectfully submit that *Butterfield* fails to teach, disclose or suggest at least “where said PNS is comprised of M bits, where M is greater than or equal to a maximum possible number of bits per symbol supported by the NS3 communication system” as recited in amended claim 48.

The Office Action alleges (p. 6-7) that *Butterfield* discloses the above limitation at Col. 11, lines 16-19 and Col. 11, lines 27-50. Specifically, the Office Action alleges that:

1 bit data combined with 2 bits of pseudonoise data produces a three-bit data output (col. 11, lines 16-19). This is an example of the relationship of the number of bits composing the pseudo-noise sequence, M, and that, which is the maximum number of bits per symbol supported by the communications system (col. 11, lines 27-50). (Office Action, p. 6-7.)

Applicants respectfully disagree. Although the cited passages mention bit sizes and bits per symbol, the passages deal exclusively with convolutional encoding rather than PNS generation: “For example, one bit could be put in from the input stream to obtain three symbols out...this would represent a rate 1/3 code” (Col. 11, lines 15-20); and “if four bits are inputted to a rate 4/5 code, then five bits would be produced” (Col. 11, line 31). The cited passages do *not* disclose either “the number of bits composing the pseudo-noise sequence N” or “the maximum number of bits per symbol supported by the communication system” as alleged by the Office Action.

Applicants’ claimed invention, as defined by amended claim 48, refers not to convolutional encoding, but to generating a PNS. Amended claim 48 defines a relationship between the number of bits output by the PNS generator and the system’s maximum number of bits per symbol. *Butterfield* discusses PNS generation in Col. 12, line 5 to Col. 14 line 50, (FIGs. 11 and 12). *Butterfield*’s convolutional encoder produces 2 encoded bits from 1 data bit, and the

2 encoded data bits are scrambled with 2 PNS bits produced by Spread RAM Lookup Table 64.

Thus,  $M=2$  in *Butterfield*. *Butterfield* does not describe any relationship between  $M$  and a maximum number of bits supported by the system. Furthermore, Applicants can find no discussion anywhere in *Butterfield* of a maximum number of bits per symbol, or even a suggestion that the system supports variable numbers of bits per system so that there is a maximum.

For at least the reason that *Butterfield* fails to disclose, teach or suggest “where said PNS is comprised of  $M$  bits, where  $M$  is greater than or equal to a maximum possible number of bits per symbol supported by the NS3 communication system,” Applicants respectfully submit that *Butterfield* does not anticipate amended claim 48. Therefore, Applicants request that the Examiner’s rejection of claim 48 be withdrawn.

c. Claim 49

Applicants traverse the rejection of claim 49, and respectfully submit that *Butterfield* fails to teach, disclose or suggest at least “said combining step combines the  $N$  least significant bits of said  $M$  bits of said PNS” as recited in claim 49. The Office Action alleges that “*Butterfield* teaches the pseudonoise bits being combined with the data.” However, claim 49 does not recite “pseudonoise bits combined with data.” Applicants’ claimed invention, as defined by claim 49, combines “ $N$  *least significant* PNS bits.” The scrambler in *Butterfield* combines all of the PNS bits with the channel encoded-symbols. There is no teaching or suggestion in *Butterfield* to use a portion of the PNS bits.

For at least the reason that *Butterfield* fails to disclose, teach or suggest “said combining step combines the  $N$  least significant bits of said  $M$  bits of said PNS,” Applicants respectfully

submit that *Butterfield* does not anticipate claim 49. Therefore, Applicants request that the Examiner's rejection of claim 49 be withdrawn.

2. Rejection of Claim 1 under 35 U.S.C. §103

Claim 1 has been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Doshi* (U.S. 6,349,138), and further in view of *Butterfield* (U.S. 5,917,852). Claim 1 is cancelled without prejudice, waiver, or disclaimer, and the rejection of this claim is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of this cancelled claim in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

3. Rejection of Claims 2 and 6 under 35 U.S.C. §103

Claims 2 and 6 have been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Doshi* (U.S. 6,349,138), and further in view of *Butterfield* (U.S. 5,917,852) and the knowledge of a person of ordinary skill in the art. Claims 2 and 6 are cancelled without prejudice, waiver, or disclaimer, and the rejection of these claims is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these cancelled claims in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

4. Rejection of Claim 3 under 35 U.S.C. §103

Claim 3 has been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Doshi* (U.S. 6,349,138), and further in view of *Butterfield* (U.S. 5,917,852), *Latka* (U.S. 5,646,996), and the knowledge of one of ordinary skill in the art. Since claim 48 is allowable for at least the reasons argued below, Applicants respectfully submit that claim 3 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claim 3 be withdrawn.

5. Rejection of Claim 4 under 35 U.S.C. §103

Claim 4 has been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Doshi* (U.S. 6,349,138), and further in view of *Butterfield* (U.S. 5,917,852), *Dewolf* (U.S. 6,488,663), and the knowledge of one of ordinary skill in the art. Since claim 48 is allowable for at least the reasons argued below, Applicants respectfully submit that claim 4 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claim 4 be withdrawn.

6. Rejection of Claim 5 under 35 U.S.C. §103

Claim 5 has been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Doshi* (U.S. 6,349,138), further in view of *Butterfield* (U.S. 5,917,852), *Stocker* (U.S. 5,235,645), and the knowledge of one of ordinary skill in the art. Since claim 48 is allowable for at least the reasons argued below, Applicants respectfully submit that claim 5 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*,

837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claim 5 be withdrawn.

7. Rejection of Claims 7-8 under 35 U.S.C. §103

Claims 7-8 have been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Butterfield* (U.S. 5,917,852), and further in view of *Romao* (U.S. 4,594,609) and *Ryan* (U.S. 5,438,620). Claims 7-8 are cancelled without prejudice, waiver, or disclaimer, and the rejection of these claims is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these cancelled claims in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

8. Rejection of Claims 9-10 under 35 U.S.C. §103

Claims 9-10 have been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Butterfield* (U.S. 5,917,852), and further in view of *Romao* (U.S. 4,594,609), *Ryan* (U.S. 5,438,620), and the knowledge of one of ordinary skill in the art. Claims 9-10 are cancelled without prejudice, waiver, or disclaimer, and the rejection of these claims is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these cancelled claims in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

9. Rejection of Claim 11 under 35 U.S.C. §103

Claim 11 has been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Butterfield* (U.S. 5,917,852), and further in view of *Romao* (U.S. 4,594,609), *Ryan* (U.S. 5,438,620), *Stocker* (U.S. 5,235,645), and the knowledge of one of ordinary skill in the art. Claim 11 is cancelled without prejudice, waiver, or disclaimer, and the rejection of this claim is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of this cancelled claim in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

10. Rejection of Claims 12 and 14-15 under 35 U.S.C. §103

Claims 12 and 14-15 have been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Butterfield* (U.S. 5,917,852), and further in view of *Romao* (U.S. 4,594,609), *Ryan* (U.S. 5,438,620), *Stocker* (U.S. 5,235,645), *Dewolf* (U.S. 6,488,663), and the knowledge of one of ordinary skill in the art. Claims 12 and 14-15 are cancelled without prejudice, waiver, or disclaimer, and the rejection of these claims is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these cancelled claims in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

11. Rejection of Claim 16 under 35 U.S.C. §103

Claim 16 has been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Butterfield* (U.S. 5,917,852), and further in view of *Romao* (U.S.

4,594,609), *Ryan* (U.S. 5,438,620), *Stocker* (U.S. 5,235,645), *Dewolf* (U.S. 5,488,663), and the knowledge of one of ordinary skill in the art. Claim 16 is cancelled without prejudice, waiver, or disclaimer, and the rejection of this claim is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of this cancelled claim in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

12. Rejection of Claim 13 under 35 U.S.C. §103

Claim 13 has been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Butterfield* (U.S. 5,917,852), and further in view of *Romao* (U.S. 4,594,609), *Ryan* (U.S. 5,438,620), *Stocker* (U.S. 5,235,645), *Dewolf* (U.S. 5,488,663), and the knowledge of one of ordinary skill in the art. Claim 13 is cancelled without prejudice, waiver, or disclaimer, and the rejection of this claim is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of this cancelled claim in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

13. Rejection of Claims 17 and 18 under 35 U.S.C. §103

Claims 17 and 18 have been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Butterfield* (U.S. 5,917,852), and further in view of *Romao* (U.S. 4,594,609), *Ryan* (U.S. 5,438,620), and *Latka* (U.S. 5,646,996). Claims 17 and 18 are cancelled without prejudice, waiver, or disclaimer, and the rejection of these claims is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate



early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these cancelled claims in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

14. Rejection of Claim 19 under 35 U.S.C. §103

Claim 19 has been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Butterfield* (U.S. 5,917,852). Applicants respectfully submit that this rejection has been overcome by the claim amendments made herein.

Applicants respectfully submit that claim 19 is allowable for at least the reason that the proposed combination of *Holthaus* in view of *Butterfield*, does not disclose, teach, or suggest at least the feature of “said PNS comprising M output bits, wherein M is at least as large as said maximum number of bits per symbol and M is independent of N” as recited in amended claim 19.

*Holthaus* does not disclose, teach, or suggest using at least a “said PNS comprising M output bits, wherein M is at least as large as said maximum number of bits per symbol and M is independent of N.” *Holthaus* contains a general discussion of a PNS generator used to scramble audio data, but contains no specifics about the number of PNS bits, or a maximum number of bits per symbol. In fact, *Holthaus* contains no discussion of either symbols or encoding.

*Butterfield* also fails to teach, suggest or disclose at least a “said PNS comprising M output bits, wherein M is at least as large as said maximum number of bits per symbol and M is independent of N.” *Butterfield* discusses PNS generation in Col. 12, line 5 to Col. 14 line 50, FIGs. 11 and 12. *Butterfield*’s convolutional encoder produces 2 encoded bits from 1 data bit, and the 2 encoded data bits are scrambled with 2 PNS bits produced by Spread RAM Lookup Table 64. Thus, M=2 in *Butterfield*. *Butterfield* does not describe any relationship between M

and a maximum number of bits supported by the system. Furthermore, Applicants can find no discussion anywhere in *Butterfield* of a maximum number of bits per symbol, or even a suggestion that the system supports variable numbers of bits per system so that there is a maximum.

Finally, *Butterfield* does not discuss any relationship between the number of PNS bits (M) and the number of bits per symbol (N). Applicants claimed invention, as defined by amended claim 48, recites that the two variables are independent. Applicants note that the lack of discussion of M and N in *Butterfield* is not equivalent to disclosing, teaching, or suggesting that the two variables are *independent*.

Accordingly, the proposed combination of *Holthaus* in view of *Butterfield*, does not teach at least the claimed limitations of a “said PNS comprising M output bits, wherein M is at least as large as said maximum number of bits per symbol and M is independent of N” as recited in amended claim 19. Since the proposed combination does not teach at least the above-described feature(s) recited in claim 19, a *prima facie* case establishing an obviousness rejection by *Holthaus* in view of *Butterfield* has not been made. Therefore, Applicants respectfully submit that amended claim 19 overcomes the rejection, and the rejection should be withdrawn.

15. Rejection of Claims 20 and 21 under 35 U.S.C. §103

Claims 20 and 21 have been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Butterfield* (U.S. 5,917,852), and further in view of *Stocker* (U.S. 5,235,645). Since claim 19 is allowable for at least the reasons argued above, Applicants respectfully submit that claims 20 and 21 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claims 20 and 21 be withdrawn.

16. Rejection of Claims 22 and 23 under 35 U.S.C. §103

Claims 22 and 23 have been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Butterfield* (U.S. 5,917,852), and further in view of *Dewolf* (U.S. 5,488,663). Since claim 19 is allowable for at least the reasons argued above, Applicants respectfully submit that claims 22 and 23 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claims 22 and 23 be withdrawn.

17. Rejection of Claims 24 and 25 under 35 U.S.C. §103

Claims 24 and 25 have been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Butterfield* (U.S. 5,917,852), and further in view of the knowledge of one of ordinary skill in the art. Applicants respectfully submit that this rejection has been overcome by the claim amendments made herein, or has been rendered moot by claim cancellation.

a. Claim 24

Claim 24 has been cancelled without prejudice, waiver, or disclaimer, and the rejection of this claim is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of this cancelled claim in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

b. Claim 25

Claim 25 has been amended to depend from claim 19. Since claim 19 is allowable for at least the reasons argued above, Applicants respectfully submit that claim 25 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claim 25 be withdrawn.

18. Rejection of Claims 26 and 28 under 35 U.S.C. §103

Claims 26 and 28 have been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Stocker* (U.S. 5,235,645), and further in view of *Butterfield* (U.S. 5,917,852), *Ryan* (U.S. 5,438,620), and in view of the knowledge of one of ordinary skill in the art. Claims 26 and 28 are cancelled without prejudice, waiver, or disclaimer, and the rejection of these claims is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these cancelled claims in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

19. Rejection of Claim 27 under 35 U.S.C. §103

Claim 27 has been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Stocker* (U.S. 5,235,645), and further in view of *Butterfield* (U.S. 5,917,852), *Ryan* (U.S. 5,438,620), and in view of the knowledge of one of ordinary skill in the art. Claim 27 is cancelled without prejudice, waiver, or disclaimer, and the rejection of this claim is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants

reserve the right to pursue the subject matter of this cancelled claim in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

20. Rejection of Claims 29 and 30 under 35 U.S.C. §103

Claims 29 and 30 have been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Stocker* (U.S. 5,235,645), and further in view of *Butterfield* (U.S. 5,917,852), *Ryan* (U.S. 5,438,620), *Latka* (U.S. 5,646,996), and in view of the knowledge of one of ordinary skill in the art. Claims 29 and 30 are cancelled without prejudice, waiver, or disclaimer, and the rejection of these claims is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these cancelled claims in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

21. Rejection of Claims 31 and 32 under 35 U.S.C. §103

Claims 31 and 32 have been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Stocker* (U.S. 5,235,645), and further in view of *Butterfield* (U.S. 5,917,852), *Ryan* (U.S. 5,438,620), *Latka* (U.S. 5,646,996), *Dewolf* (U.S. 5,488,663), and in view of the knowledge of one of ordinary skill in the art. Claims 31 and 32 are cancelled without prejudice, waiver, or disclaimer, and the rejection of these claims is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these cancelled claims in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

22. Rejection of Claims 33, 34, and 36-46 under 35 U.S.C. §103

Claims 33, 34, and 36-46 have been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Stocker* (U.S. 5,235,645), and further in view of *Latka* (U.S. 5,646,996), *Butterfield* (U.S. 5,917,852), *Stocker* (U.S. 5,235,645), *Ryan* (U.S. 5,438,620), and in view of the knowledge of one of ordinary skill in the art.

a. Claims 33, 34, 36-40, 42, and 44

Claims 33, 34, 36-40, 42 and 44 are cancelled without prejudice, waiver, or disclaimer, and the rejection of these claims is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these cancelled claims in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

b. Claims 41, 43, 45, and 46

Since claims 53 and 56 are allowable for at least the reasons argued below, Applicants respectfully submit that claims 1, 43, 45 and 46 are allowable for at least the reason that each depend from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claims 41, 43, 45 and 46 be withdrawn.

23. Rejection of Claim 35 under 35 U.S.C. §103

Claim 35 has been rejected under §103(a) as allegedly obvious over *Holthaus* (U.S. 6,229,897) in view of *Stocker* (U.S. 5,235,645), and further in view of *Latka* (U.S. 5,646,996), *Butterfield* (U.S. 5,917,852), *Dewolf* (U.S. 5,488,663), *Ryan* (U.S. 5,438,620), and in view of the

knowledge of one of ordinary skill in the art. Claim 35 is cancelled without prejudice, waiver, or disclaimer, and the rejection of this claim is therefore rendered moot. Applicants take this action merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of this cancelled claim in a continuing application, if Applicants so choose, and do not intend to dedicate any of the cancelled subject matter to the public.

24. Newly Added Claims


Applicants submit that no new matter has been added in the new claims 50-61 and that new claims 50-61 are allowable over the cited prior art. Specifically, new claim 51 is allowable for at least the reason that the cited prior art does not disclose, teach, or suggest at least the feature of a “PNS generator configured to maintain a state and to produce M output bits at a rate derived from a current symbol rate, wherein M is at least as large as the maximum number of bits per symbol.” New claim 54 is allowable for at least the reason that the cited prior art does not disclose, teach, or suggest at least the feature of a “first PNS generator configured to maintain a first state and to produce M first PNS output bits at a rate derived from a current symbol rate, wherein M is at least as large as the maximum number of bits per symbol.” Finally, new claim 58 is allowable for at least the reason that the cited prior art does not teach, disclose, or suggest at least the feature of “advancing the first PNS generator state at the end of each interval in a common timing reference, where said common timing reference is a multiple of the symbol rate.” Therefore, Applicants request that the Examiner enter and allow the above new claims.

**CONCLUSION**

Applicants respectfully request that all outstanding objections and rejections be withdrawn and that this application and presently pending claims 3-5, 19-23, 25, 41, 43, 45-46, 48-61 be allowed to issue. If the Examiner has any questions or comments regarding Applicants' response, the Examiner is encouraged to telephone Applicants' undersigned counsel.

Respectfully submitted,

**THOMAS, KAYDEN, HORSTEMEYER  
& RISLEY, L.L.P.**

By:   
**Karen G. Hazzah, Reg. No. 48,472**

100 Galleria Parkway, NW  
Suite 1750  
Atlanta, Georgia 30339-5948  
Tel: (770) 933-9500  
Fax: (770) 951-0933